Vitreous State (Cont.)   SOV/5035

institutes were cited for their contribution to the development of glass science
and technology: Gosudarstvennyy opticheskiy institut (State Optical Institute),
Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR),
Fizicheskiy institut AN SSSR (Physics Institute AS USSR), Fiziko-tekhnicheskiy
institut AN SSSR (Physicotechnical Institute AS USSR), Institut fiziki AN BSSR,
Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk),
Laboratory of Physical Chemistry of Silicates of the Institut obshchey i neorgani-
cheskoy khimii AN BSSR, Minsk (Institute of General and Inorganic Chemistry,
Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnykh
soyedineniy AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstven-
nyy institut stekla (State Institute for Glass), Gosudarstvennyy institut stek-
lovolokna (State Institute for Glass Fibers), Gosudarstvennyy institut elektrotekh-
nicheskogo stekla (State Institute for Electrical Glass), Sibirskiy fiziko-
technicheskiy institut, Tomsk (Siberian Physicotechnical Institute, Tomsk), Leningrad-
skiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-
tekhnologicheskiy institut (Moscow Institute of Chemical Technology), Leningradskiy
tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institut imeni
Lensovet), Belorusskiy politekhnicheskiy institut Minsk (Belorussian Polytechnic
Institute, Minsk), Novocherkasskiy politekhnicheskiy institut (Novocherkassk
Polytechnic Institute), and Sverdlovskiy politekhnicheskiy institut (Sverdlovsk

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Vitreous State (Cont.)   SOV/5035

Polytechnic Institute). The Conference was sponsored by the Institute of Silicate Chemistry AS USSR (Acting Director - A.S. Gotlib), the Vsesoyuznoye khimicheskoye obshchestvo im. D.I. Mendeleyeva (All-Union Chemical Society imeni D.I. Mendeleyev), and the Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova (State "Order of Lenin" Optical Institute imeni S.I. Vavilov). The 15 resolutions of the Conference include recommendations to organize a Center for the purpose of coordinating the research on glass, to publish a new periodical under the title "Fizika i khimiya stekla" (Physics and Chemistry of Glass), and to join the International Committee on Glass. The Conference thanks A.A. Lebedev, Academician, Professor, and Chairman of the Organization of Committee; Ye.A. Poray-Koshits, Doctor of Physics and Mathematics, Member of the Organizational Committee; and R.L. Myuller, Doctor of Chemical Sciences, Member of the Organizational Committee. The editorial board thanks G.M. Bartenev, M.V. Vol'kenshteyn, L.I. Demkina, D.P. Dobychin, S.K. Dubrovo, V.A. Ioffe, and B.T. Kolomiyets. References accompany individual reports.

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Vitreous State (Cont.)   SOV/5035

TABLE OF CONTENTS:

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GENERAL PROBLEMS OF THE VITREOUS STATE

Basic Methods and Results of Studying the Structure of Glasses

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Vitreous State (Cont.)   SOV/5035

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Final Session of the Conference

On the State and on the Further Tasks Connected With the Solution of Glass
Structure Problems (Resolution of the Third All-Union Conference Held
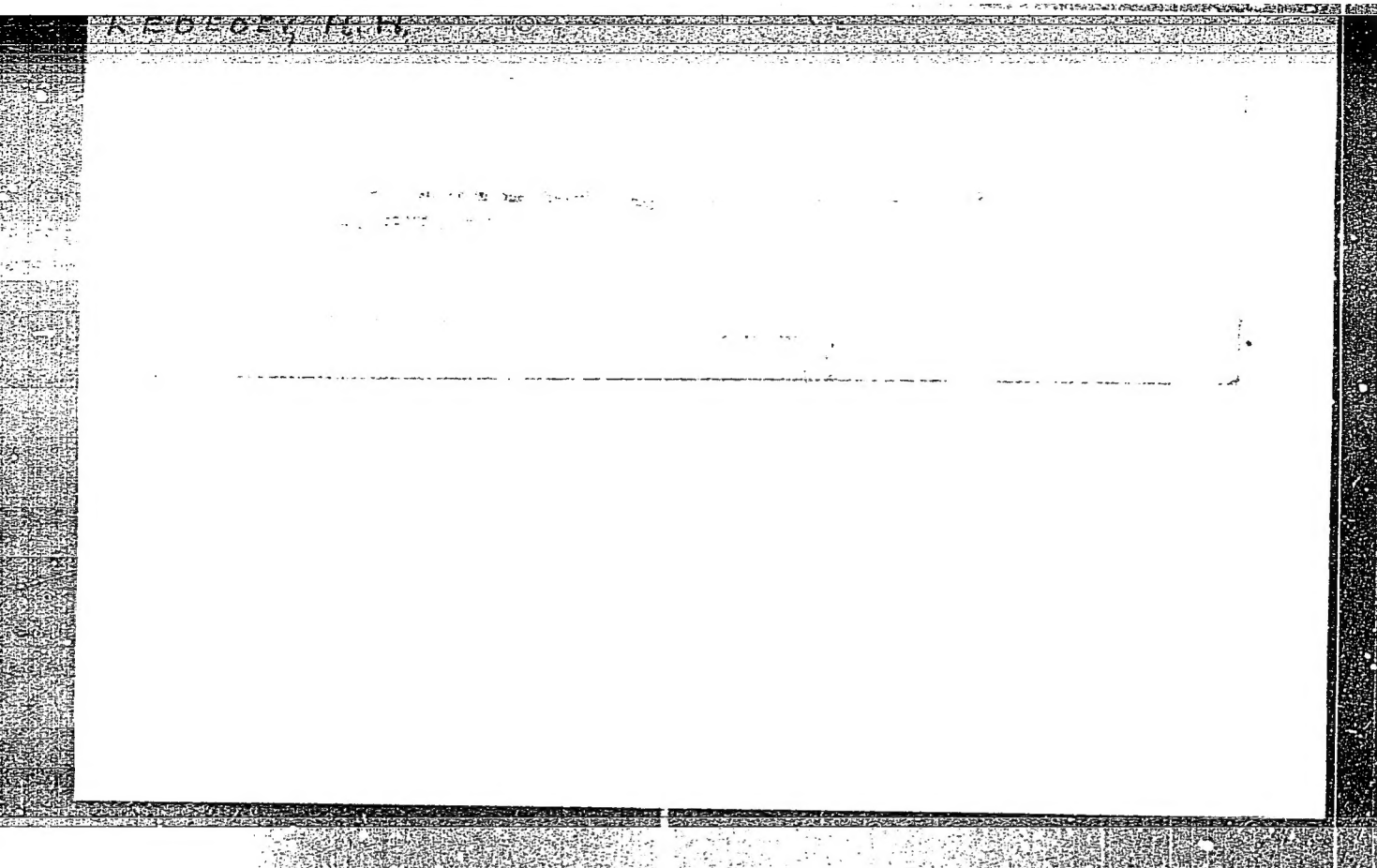During November 16-21, 1959)   528

AVAILABLE: Library of Congress

Card 22/22   JA/dwm/gmp
                                                    6-29-61

LEBEDEV, A.A.
LE BE DEV, A.A

Deoxidation of open steels in the ladle   K. A. Lugurova
Tr. F. Nogoritsyn, and A. A. ____ _____ Met. Plant, Novo
Tagil'sk). *Stal'* 16, 1053–5 (1956). — The practice saves
22–8% FeMn, increases production by about 1% by saving
time in the furnace, and does not lower the quality of the
steel.   L. E. Gat

λ Λ Γ l ι ι ι \ /   *//*

137-1957-12-23266

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 59 (USSR)

AUTHORS: Lebedev, A., Savel'yev, D.

TITLE: The Operation of Recovery Boilers Installed With Open-hearth furnaces
          (Rabota kotlov-utilizatorov, ustanovlennykh za martenovskimi
          pechami)

PERIODICAL: V sb.: Kotly-utilizatory martenovsk. pechey. Moscow,
             Metallurgizdat, 1957, pp 172-180

ABSTRACT: The boiler room of a open-hearth furnace shop contains two KU-50
            recovery boilers (RB) with a steam-generating capacity of 2.7 to
            3.4 t/hr and a steam pressure of 2.4 to 3.7 atu. The efficiency
            of the RB is less than originally anticipated; this is explained by
            the following factors: 1) low efficiency of the compressed-air
            blasting of the heating surfaces (in 15 days of operation the pro-
            ductivity of the RB decreased from 3.7 to 1.5 t/hr); 2) insufficient
            capacity of the exhaust system results in the passage of only a
            portion (36-67 percent) of the gases from the open-hearth furnaces
            through the RB's; 3) unsatisfactory exhaust system for the re-
            moval of gases from the RB's resulting in reduced draft. The
            replacement of air blasting of the heating surfaces by washing

Card 1/2

137-1957-12-23266

The Operation of Recovery Boilers Installed with Open-hearth Furnaces

with feed water at 60-70° proved to be effective and resulted in an increase in the productivity of the RB's by 3.7 to 4 t/hr. The heating surfaces are washed daily for about 15 to 20 minutes.

Ye. N.

1. Boilers-Operation   2. Furnaces-Applications

Card 2/2

Lebedev, A.A.

AUTHORS: Vecher, H.A., Lebedev, A.A. and Korneyev, N.D. (Engineers)

TITLE: Use of sinter in open-hearth furnace smelting. (Primeneniye aglomerata v martenovskoy plavke). 130 - 6 - 8/27

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, pp.17-19 (USSR).

ABSTRACT: Open-hearth ore has been partly or completely replaced by sinter at the Nizhne-Tagil'sk metallurgical combine since early in 1956. From experimental heats and the statistical treatment of operating data the following main conclusions are drawn: under otherwise similar conditions more sinter is charged than ore (e.g. 8% more for rail steel); more slag is run with sinter than with ore; because of its lower melting point the duration of melting is reduced with sinter to 12-15 min. per heat; the melt-down slag contains more ferrous oxide; the phosphorus content at melt-down is 0.002-0.012% less; the consumption of ore for refining is less because of the more oxidized melt-down slag obtained with sinter; and lime and bauxite consumptions are also less; the rate of carbon removal during the ore boil is less and the duration of finishing is reduced. The reasons for these effects of sinter are discussed and the corresponding quantitative data tabulated. The composition of the sinter was: 58.6% Fe, 19.2% FeO, 62.6% Fe$_2$O$_3$,

Card 1/2

130 - 6 - 8/27

Use of sinter in open-hearth furnace smelting. (Cont.)

0.15% S, 0.047% P, 0.82% Mn, 7.6% SiO_2, 3.82% CaO, 1.60% MgO, 3.35% Al_2O_3; it contained 25% of $<$10 mm fines on charging.

There are 2 tables.

ASSOCIATION: Nizhne-Tagil'sk Metallurgical Combine. (Nizhne-Tagil'skiy Metallurgicheskiy Kombinat).

AVAILABLE:

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3(9)   SOV/5o-59-5-13/22
AUTHOR: Lebedev, A. A.

TITLE: Hydrometeorological and Industrial Sea Bulletin (Morskoy gidro-
              meteorologicheskiy i promyslovyy byulleten') (From the Experience
              of the Murmansk Hydrometeorological Service Administration) (iz
              opyta Murmanskogo UGMS)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 5, p 50 (USSR)

ABSTRACT: The Murmanskoye UGMS (Murmansk Hydrometeorological Service Admini-
              stration) together with the Polyarnyy institut morskogo rybnogo
              khozyaystva i okeanografii (Polar Scientific Research Institute
              of Sea Fisheries and Oceanography) issues a monthly "Hydrometeoro-
              logical and Industrial Sea Bulletin". The Bulletin consists of
              2 parts: the first contains a survey of the weather and hydrolo-
              gical conditions, the second a survey of the course and conditions
              of trawl fishing and the prospective conditions for this industry.
              According to the character of the synoptic processes, the Bulletin
              brings the analysis of the isabnormal lines of air temperature
              and of the resulting wind during the periods with a relatively
              uniform circulation in the atmosphere. Principal attention is
Card 1/2   paid to the heat content of the water masses, as a change in the

Hydrometeorological and Industrial Sea Bulletin. (From the   SOV/5o-59-5-13/22
Experience of the Murmansk Hydrometeorological Service Administration)

physical state of the living space of fish exerts a direct or
indirect influence on the propagation of fish in the sea.Besides
the general analysis, also the distribution of water temperature
within the fishing areas, and even within the individual "squares"
with a size of 10 by 30 nautical miles, is indicated. In winter,
long-termed forecasts for the water temperature in the layer near
the bottom along the flow filament of the Murmansk Current are
given for the individual "squares" with an earliness of 1-2
months. The last section of the Bulletin brings the forecast of
the Polar Institute for the prospective conditions of the fishing
industry under consideration of all hydrometeorological and
biological factors. The Bulletin appears monthly, not later than
on the 7th day of each month, with an edition of 700 copies, and
is immediately sent to all trawlers.

Card 2/2

REVEBTSOV, V.P.; ABRAMOV, B.A.; NAGOVITSYN, D.F.; LEBEDEV, A.A.;
    OSIPOV, G.V.; TANTSYREV, V.V.; ISUPOV, V.F.; ZAYTSEVA, Ye.I.

    Quality of manganese ferroalloys from ores of the Polunochnoye
    deposit. Stal' 21 no.9:806-809 S. '61.   (MIRA 14:9)

    1. Institut metallurgii Ural'skogo filiala Akademii nauk;
    Nizhne-Tagil'skiy metallurgicheskiy kombinat i Kombinat im.
    Serova.
            (Ferromanganese) (Polunochnoye region--Manganese ores)

KLYUCHEROV, Anatoliy Petrovich; KONDRAT'YEV, Sergey Nikolayevich;
LEBEDEV, Aleksandr Aleksandrovich; VLASOV, Radem Vasil'yevich;
LITVISHKO, V.N., inzh., retsenzent; BUR'KOV, M.M., inzh., red.;
LEPINSKIKH, B.M., kand. tekhn. nauk, red.; KOROL', V.P., tekhn.
red.

[Work experience of Novotagil'skoye steel smelters]Opyt raboty
nizhnetagil'skikh staleplavil'shchikov. Sverdlovsk, Metallurg-
izdat, 1963. 93 p.   (MIRA 16:4)
        (Novotagil'skoye--Open-hearth process)

PHASE I BOOK EXPLOITATION   SOV/6478

Al'tman, Morits Borisovich, Aleksandr Aleksandrovich Lebedev, and
    Matvey Vasil'yevich Chukhrov

Plavka i lit'ye splavov tsvetnykh metallov; metallurgicheskiye
    osnovy (Melting and Casting of Nonferrous Metal Alloys; Metallur-
    gical Principles) Moscow, Metallurgizdat, 1963. 523 p. Errata
    slip inserted. 4400 copies printed.

Ed. (Title page): A. T. Tumanov, Doctor of Technical Sciences,
    Honored Scientist and Technologist of the RSFSR; Ed. of
    Publishing House: O. M. Kamayeva; Tech. Ed.: Ye. B. Vaynshteyn.

PURPOSE: This book is intended for engineering personnel of metal-
    lurgical and metal-working plants and scientific research institutes.
    It may also be of interest to students at schools of higher
    education.

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Melting and Casting (Cont.)   SOV/6478

COVERAGE: The book discusses basic principles of the theory and
    practice of melting, casting, and crystallizing nonferrous metals
    and alloys. The authors review problems of interaction between
    gases and metals, degassing, removal of solid nonmetallic inclusions,
    modification, segregation, and interaction between the metal and
    the mold; properties of the nonferrous metals and alloys; and
    methods of melting and casting ingots and parts made from aluminum,
    magnesium, copper, and other alloys. No personalities are mentioned.
    There are 275 references, mostly Soviet.

TABLE OF CONTENTS:

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L 58395-65   EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(1)/EPR,/EPA(w)-2/T/EWP(b)

Pr-4/Ps-4/Pt-7   WW/JG/WH   Pab-10/

ACCESSION NR: AR5013015

UR/0137/65/000/004/I027/I028

539.37:669.621.762

SOURCE: Ref. zh. Metallurgiya, Abs. 4I172

AUTHOR: Lebedev, A. A.

56
55
B

TITLE: Theoretical problems on the strength of metallo-ceramic materials

CITED SOURCE: Tr. 7 Vses. nauchno-tekhn. konferentsii po poroshk. metallurgii. Yerevan, 1964, 55-63

TOPIC TAGS: cermet, material strength, mechanical property, silicon carbide

TRANSLATION: Strength criteria were studied by evaluating the strength properties of a material from the point of view of mechanical theories, assuming infinite divisibility and homogeneity of the substance, with corresponding correction by statistical methods to calculate the more series structural imperfections, characteristic of the given material. This approach to the problem gives a limiting strength which is the product of two functions: $\sigma = NP$, where N is a function of the invariants of stresses and of certain constants of the material; P is a func-

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L 58395-65

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ACCESSION NR: AR5013015

tion of the volume of material in the stressed and deformed state and of its con-
stants, depending on the nature of the most serious defects. The function N, in
coordinates σ_1, σ_2 and σ_3, must be a smooth curvilinear surface since the strength
conditions obviously change gradually with the gradual change in the principal nor-
mal stresses. The form of the function P is dependent on the initial form of the
material and on the distribution of stresses near defects. The role of the func-
tion P increases in the case of low-strength materials, a typical representative of
which is a cermet material. Results are given of an experimental study of a cer-
met composition based on silicon carbide, in a plane stressed state created in a
tubular specimen by the simultaneous application of an axial force, internal pres-
sure, and torque, in various combinations. The form of the function P and the
strength condition best corresponding with the experimental data was found. The
equation describing the strength condition expresses the parabolic relationship be-
tween the specific potential energy of deformation and the spherical tensor. The
function N is obtained in the form of the design equation of the 4-th strength
theory. The function P takes into account, by statistical methods, the effect which
the level of the potential energy of the imperfections most characteristic for the
given material has on the limiting values. L. Gordiyenko.

SUB CODE: MT, AS   ENCL: 00

Card 2/2

PORTNOY, K.I.; LEBEDEV, A.A.

[Magnesium alloys (properties and technology); a handbook] Magnievye splavy
(svoistva i tekhnologiia) spravochnik. Moskva, Gos. nauchno-tekhn. izd-vo
lit-ry po chernoi i tsvetnoi metallurgii, 1952. 736 p.   (MLRA 6:9)
                                               (Magnesium alloys)

Lebedev A.A.

LEBEDEV, A. A.

Handbook on Machine-Building (Cont.)   SOV/3505

Spravochn&kpo mashinostroitel'nym materialam v chetyrekh tomakh,
tom 2: Tsvetnyye metally i ikh splavy (Handbood on Machine-Building
Materials in 4 volumes, v. 2: Nonferrous Metals and Alloys) Moscow,
Mashgiz, 1959,   639 p I

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Handbook on Machine-Building (Cont.)   SOV/3505

Card 8/22

18.1000

45230
S/806/62/000/003/015/018

AUTHORS: Lebedev, A.A., Anikina, A. D.

TITLE: Salt fluxes for the introduction of zirconium into light alloys.

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniye splavov tsvetnykh metallov. no.3, 1962, 181-186.

TEXT: The introduction of metallic Zr into Mg melts is rendered difficult by the elevated m. p. and chemical activity relative to gases of the Zr. Introduction of Zr as a chloride is less difficult but impairs the corrosion resistance of the resulting alloys. The introduction of K_2ZrF_6 appears most effective. However, the direct introduction of K_2ZrF_6 requires a melt T of 920°C and entails substantial Zr losses. The phase diagram Zr_2F_4-KF was investigated, and 3 congruently fusible compounds were found: $KZrF_5$ with a m.p. of 600°, K_2ZrF_6 with a m. p. of 500°, and K_3ZrF_7 with a m. p. of 930°, together with 4 eutectics have m. p.'s of 790, 500, 400, and 430°C, respectively. It is concluded that the reduction of Zr from $KZrF_5$ proceeds according to the following 3-stage process: $6KZrF_5 + 12Mg \rightleftharpoons$ $3K_2ZrF_6 + 6MgF_2 + 3Zr + 6Mg$ (first stage) $\rightarrow 2K_3ZrF_7 + 8MgF_2 + 4Zr$ (second stage) $\rightleftharpoons$

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Salt fluxes for the introduction of zirconium ...

S/806/62/000/003/015/018

$\rightleftharpoons 6KF + 12MgF_2 + 6Zr$ (third stage). As we proceed from left to right in the re-
action formula, more and more substances with extremely high m.p. appear, and
the reaction may never develop past the second stage and only part of the Zr intro-
duced may become liberated. Inasmuch as a T increase beyond 920-950° is not
practicable, a search was begun for a flux or salt fusion that would: (1) Supply
K_2ZrF_6, (2) not contain any elements that would chemically react with Mg and Zr,
(3) have as low a m.p. as possible, (4) have a low viscosity and be surface-active
relative to Mg, and (5) produce reaction products that can be readily removed from
the melt. Such a flux was found in a fusion containing 66% K_2ZrF_6, 26% LiCl, and
8% CaF_2. This flux permits (1) a lowering of the melt T during introduction of the
Zr-containing salts from 900-920° to 800° for Mg alloys and from 1,000 to 750-760°
for Al alloys, (2) a reduction in the irreversible losses, (3) an approximate doubl-
ing of the delivery of Zr to the alloy, (4) a better quantitative stability of the
amount of Zr delivered to the alloy, and (5) considerable simplification of the pro-
cess of preparation of the alloys. Details of the comparative tests, in which the
component ratios, charge ratios, and T were varied, are described, tabulated, and
graphed. . There are 3 figures and 2 tables; no references.

ASSOCIATION: None given.

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L 22464-65   EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)   AFWL/SSD/ASD(f)-3/
ASD(m)-3/AFETR/AFTC(p)   JD/EM

ACCESSION NR: AR4045245   S/0124/64/000/007/V088/V089

SOURCE: Ref. zh. Mekhanika, Abs. 7V666   E

AUTHOR: Lebedev, A. A.

TITLE: The problem of the experimental investigation of creep and stress
rupture strength of materials in a complex stress state

CITED SOURCE: Sb. Polzuchest' i dlitel'n. prochnost'. Novosibirsk, Sib. otd.
AN SSSR, 1963, 148-151

TOPIC TAGS: creep, stress rupture strength, complex stress, high temper-
ature strength, cathetometer

TRANSLATION:. A small device is described which permits the testing of materials
for short-term and stress-rupture strength under a plane stress state and at
high temperature, with the sample subjected to any system of loading by axial
tension or moment of torque. The device provides for reliable fastening and

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L 22464-65

ACCESSION NR: AR4045245

heating of the sample, its transport into the internal cavity of the working medium, the application to the sample of supplementary axial force or moment of torque from the load-applying system, as well as operational reliability and safety. The placing of a heating element within the internal cavity of the sample (sic) considerably reduces the force of the explosion together with errors in the readings of the thermocouples, and preserves the heating element when the sample is destroyed. This heater is actually a metal-ceramic rod terminating in a nickel electrode. The temperature can be regulated along the length of the sample. The output of the heating element is designed for working temperatures on the order of 1000C. Deformations in the sample can be measured in two ways: either by means of a cathetometer according to the relative displacements of two expandable brackets, or by means of high-temperature sensors. A special high-pressure unit, rated for 500 kg/cm^2, was designed in order to create pressure in the sample by the working gas medium.

A. M. Lokoshchenko

SUB CODE: AS   ENCL: 00

Card 2/2

ACCESSION NR: AP4010059   S/0021/64/000/001/0059/0062
                                                    A. A.

AUTHOR: Py*sarenko, G. S. (Corresponding member); Lebedev, A. O.

TITLE: On the criterion of strength of materials

SOURCE: AN UkrRSR. Dopovidi, no. 1, 1964, 59-62

TOPIC TAGS: material strength, stress tensor, stress tensor invariant, stressed silicon carbide

ABSTRACT: Proof is given of the applicability of an estimate of the strength of materials in the form of a sum of two functions, one of which is a function of the stress tensor invariants, while the second, which is a function of the volume of the strained material and some of its constants, is of a statistical nature.
     The results are presented of an experimental study of the strength on a silicon carbide base with a plane stressed state. These results confirm the applicability and usefulness of the method. Orig. art. has 3 graphs and 6 numbered equations.

Card   1/2

ACCESSION NR: AP4010059

ASSOCIATION: Insty*tut Metalokeramiky* ta spetsplaviv AN UkrSSR (Institute of Metallo-ceramics and Special Alloys, AN UkrSSR)

SUBMITTED: 05Jun63   DATE ACQ: 10Feb64   ENCL: 00

SUB CODE: AP   NO REF SOV: 005   OTHER: 002

Card ____2/2____

LEBEDEV, A.A.

Improving the shape of hard-alloy blades. Mashinostroitel'
no.3:33 Mr '64.   (MIRA 17:4)

USSR/Medicine - Physiology

FD-1330

Card 1/1   : Pub 33-8/25

Author   : Lebedev, A. A. and Sevast'yanova, L. V.

Title   : Conditioned reflex changes in diuresis in a dog with a transplanted kidney

Periodical   : Fiziol. zhur. 4, 441-444, Jul/Aug 1954

Abstract   : Experiments on dogs were conducted to determine how a transplanted kidney reacts to the regulating influence of the cortex. The cerebral cortex regulates urination of a transplanted kidney for forming temporary bonds of positive and negative significance. The ultimate effects of positive and differentiated irritants depend on the magnitude of initial urination. Positive conditioned reflex increases urination and at the same time reduces the specific gravity of urine; it also decreases concentration of creatine and chlorides. Graphs. Six Soviet references.

Institution   : Chair of Pharmacology of Ivanovo State Medical Institute

Submitted   : October 10, 1952

LEBEDEV, A.A.

Interoceptive effects from the stomach on diuresis. Biul. eksp. biol. i med. 38 no.11:7-9 N '54.   (MLRA 8:1)

1. Iz kafedry farmakologii (zav. dotsent G.M.Shpuga) Ivanovskogo meditsinskogo instituta (dir. dotsent Ya.M.Romanov)
        (STOMACH, physiology,
            eff. of stimulation on diuresis in dogs)
        (DIURESIS, physiology,
            eff. of stomach stimulation in dogs)

LEBEDEV, A. A.

Lebedev, A. A.

"Reflex connections between the stomach and kidneys." Ivanovo State
Medical Inst. Ivanovo, 19_5. (Dissertation for the Degree of Candidate
in Technical Science.)

Knizhnaya letopis'
No. 15, 1956. Moscow.

SHPUGA, L.M., LEBEDEV, A.A.

Function of a reinnervated transplanted kidney [with summary in English]
Eksper.khir. 1 no.4:59-64 Jl-Ag '56   (MIRA 11:10)

1. Iz kafedry farmakologii Ivanovskogo meditsinskogo instituta.
        (KIDNEYS, transpl.
                exper., re-inner. (Rus))

LEBEDEV, A.A.; YAROSLAVTSEV, S.A.

A model for the study of kidney function in an experiment involving surgical preparation. Urologiia 22 no.2:38-39 Mr-Ap '57. (MIRA 10:7)

1. Iz kafedry farmakologii (zav. - dotsent G.M.Shpuga) i kafedry fakul'tetskoy khirurgii (zav. - prof. M.A.Blagoveshchenskiy) Ivanovskogo meditsinskogo instituta.
          (KIDNEYS, funct. tests
                in chronic exper. in dogs)

LEBEDEV, A.A.

Afferent pathways of reflex action from the stomach on micturition
[with summary in English]. Biul.eksp.biol.i med. 43 no.1:20-23
Ja '57.

(MLRA 10:8)

1. Iz kafedry farmakologii (zav. - dotsent G.M.Shpuga) Ivanovskogo
meditsinskogo instituta (dir. - dotsent Ya.M.Romanov). Predstavlena
deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim.
        (STOMACH, physiology,
            eff. of mechanical stimulation on diuresis in dogs
            afferent reflex arch (Rus))
        (DIURESIS, physiology,
            eff. of mechanical stimulation of stomach in dogs,
            afferent reflex arch (Rus))

LEBEDEV, A.A.

Efferent reflex areas from the stomach on affecting mecturition [with summary in English]. Biul.eksp.biol.med. 44 no.8:8-10 Ag '57.
(MIRA 10:11)

1. Iz kafedry farmakologii (zav. - dotsent G.M.Shputa) Ivanovskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR prof. V.V.Parinym.
(KIDNEYS, physiology,
reflex response to mechanical stimulation of stomach, eff. route (Rus))
(STOMACH, physiology,
eff. of mechanical stimulation on kidney funct., efferent reflex arch (Rus))

LEBEDEV, AA

LEBEDEV, A.A.

Some reflexes of a reinnervated transplanted kidney [with summary in English]. Biul.eksp.biol. i med. 44 no.10:47-52 O '57.
(MIRA 11:2)

1. Iz kafedry farmakologii (zav. - dotsent G.M.Shpuga) Ivanovskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim.
        (KIDNEYS, transplantation,
            reflexes in reinnervated transplanted kidney (Rus))

LEBEDEV, A.A.

Change in residual blood nitrogen and urine nitrogen in experimental renal colic; calculi, urinary. Urologiia 23 no.6:6-9 N-D '58. (MIRA 11:12)

1. Iz kafedry farmakologii (zav. - dotsent G.M. Shpuga) i kafedry biokhimii (Zav. - dotsent I.G. Menzorov) Ivanovskogo meditsinskogo instituta.
          (NITROGEN
                   residual blood nitrogen & urine nitrogen, eff. of kidney
                   colic in dogs (Rus))

4149. CHANGES IN PERIODIC MOTOR ACTIVITY OF THE STOMACH FOLLOW-
ING STIMULATION OF THE RENAL PARENCHYMA (Russian text) -
Lebedev A. A. Dept. of Pharmacol., Med. Inst., Ivanovo - FIZIOL. ZH.
IM. SECH. 1958, 44/6 (560-564) Illus. 4

Stimulation of the parenchyma of an intact kidney changes periodic gastric motility
on the day of stimulation and on subsequent days. The period of rest (pause) is
shortened immediately following stimulation and on subsequent days usual pauses
between contractions are missing. Stimulation of the parenchyma of a transplanted
kidney is also capable of modifying periodic gastric activity. The changes appear
later, however, than when the parenchyma of an intact kidney is stimulated.

Simonson - Minneapolis, Minn.
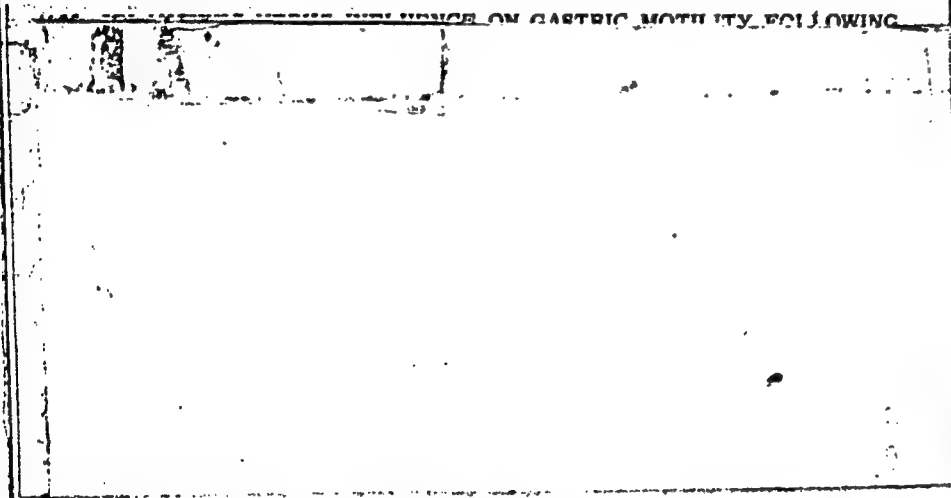
LEBEDEV, A.A.

Some reflexes in the transplanted reinnervated kidney. Biul. eksp. biol i med. 50 no.12:3-7 D '60. (MIRA 14:1)

1. Iz kafedry farmakologii (zav. - prof. G.M.Shruga) Ivanovskogo meditsinskogo instituta. Predstavlena akademikom V.N.Chernigovskim.
(KIDNEYS—TRANSPLANTATION)

LEBEDEV, A.A.

Effect of adrenaline on the function of a transplanted reinnervated
kidney. Fiziol. zhur. 47 no.7:892-899 Jl '61.   (MIRA 15:1)

1. From the Medical Institute, Ivanovo.
        (KIDNEYS—TRANSPLANTATION)   (ADRENALINE)

LEBEDEV, A.A.

Effect of acetylcholine on the function of the transplanted kidney.
Fiziol.zhur. 47 no.8:1062-1067 Ag '61.   (MIRA 14:8)

1. From the Department of Pharmacology, Medical Institute, Ivanovo.
         (CHOLINE)   (KIDNEYS—INNERVATION)

LEBEDEV, A.A.

Comparative evaluation of diuretic changes in experimental convulsive seizures. Biul. eksp. biol. i med. 51 no.3:52-54 Mr '61.
(MIRA 14:5)

1. Iz kafedry farmakologii (zav. - prof. G.M.Shpuga) i kafedry biokhimii (zav. - dotsent V.A.Usol'tseva) Ivanovskogo gosudarstvennogo meditsinskogo instituta (dir. - dotsent Ya.M.Romanov). Predstavlena akademikom V.N.Chernigovskim.
(URINE—SECRETION)   (CONVULSIONS)

LEBEDEV, A.A.

Efferent nerves in a transplanted re-innervated kidney. Biul. eksp.
biol. i med. 51 no.4:8-12 Ap '61.   (MIRA 14:8)

1. Iz kafedry farmakologii (zav. - prof. G.M.Shpuga) Ivanovskogo
meditsinskogo institut. Predstavlena akademikom V.N.Chernigovskim.
                    (KIDNEYS—TRANSPLANTATION)

LEBEDEV, A.A.

Function of a transplanted reinnervated kidney. Biul.eksp.biol.i
med. 54 no.7:18-22 Jl '62.   (MIRA 15:11)

1. Iz kafedry farmakologii (zav. - prof. G.M.Shpuga) Ivanovskogo
meditsinskogo instituta. Predstavlena deystvitel'nym chlenom
AMN SSSR V.N.Chernigovskim.
                  (KIDNEYS--TRANSPLANTATION) (VAGUS NERVE)

LEBEDEV, A.A.

Compensatory hypertrophy of a transplanted reinnervated kidney.
Biul. eksp. biol. i med. 54 no.8:41-43. Ag '62.

(MIRA 17:11)

1. Iz kafedry farmakologii (zav. - prof. G.M. Shpuga) Ivanovskogo
meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN
SSSR V.V. Parinym.

LEBEDEV, A.A.; KOROLEV, B.K.; RATNIKOV, V.I.

Changes in the blood protein fractions in dogs following
autotransplantation of kidneys and spleen. Biul. eksp. biol.
i med. 60 no.11:42-44 N '65.

(MIRA 19:1)

1. Kafedra farmakologii (ispolnyayushchiy obyazannosti zav. -
prof. N.A. Myasoyedova) i kafedra obshchey khimii (zav. - dotsent
N.M. Chistyakov) Ivanovskogo meditsinskogo instituta. Submitted
June 8, 1964.

L 04785-67   EWT(m)/EWP(t)/ETI   IJP(c)   JD

ACC NR: AP6024467   SOURCE CODE: UR/0181/66/008/007/2074/2076

AUTHOR: Zotova, N. V.; Lebedev, A. A.; Nasledov, D. N.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Diffusion of cadmium in indium arsenide

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2074-2076

TOPIC TAGS: cadmium, physical diffusion, indium compound, arsenide, pn junction, semiconductor impurity

ABSTRACT: In view of the limited amount of systematic data concerning the diffusion of impurities in indium arsenide, the authors present some new results on the diffusion of Cd in InAs of n-type. The donor content was $4 \times 10^{16} - 6 \times 10^{19}$ cm^{-3}. The tests were made on single-crystal indium arsenide, both pure and doped with tellurium and selenium. The diffusion was in saturated cadmium vapor at 750 - 780C and 10^{-6} mm Hg. The depth of the p-n junction was determined by the removal of layer method and determination of the sign of the charge from the thermal emf. The results show that the diffusion of Cd in InAs depends on the initial concentration of the donor impurity but not on the nature of the donor; the diffusion coefficient decreases with increasing impurity concentration in the initial substance. The decrease in the diffusion coefficient in strongly doped material is sho-n to be connected with the formation of donor-acceptor pairs which diffuse more slowly than free acceptors. Orig. art. has: 2

Card 1/2

L 04785-67

ACC NR: AP6024467

figures, 2 formulas, and 2 tables.

SUB CODE: 20/   SUBM DATE: 07Dec65/   ORIG REF: 001/   OTH REF: 001

Card 2/2 pla

LEBEDEV, A.A.

Carbohydrate metabolism and the endocrine-vegetative correlation in cases of hyperemesis gravidarum. A. A. Lebedev. Akusherstvo i Ginekol. (Obstet. and Gynecol.) 1940, No. 2, 10–15.—The glucose tolerance was estimated in a number of the above patients. The majority of them had an aversion to sugar resulting in vomiting, therefore, injections of adrenaline (1 cc. of 1:1000 soln.) were given instead of sugar administration. The blood was analyzed just before and at $1/2$ hr. intervals for 3 hrs. after the injection. In mild cases the carbohydrate metabolism was not impaired, although the sympathetic and parasympathetic nervous systems were somewhat excited. The hyperglycemia coefficient (Bodon) was 1.77 or 77%; the hypoglycemia index (Rafalsky) was 0.85 or 15%; the carbohydrate metabolism index (Sokolnikov) was 0.84. In moderate cases there was a pronounced excitation of the vegetative nervous system and this led to a derangement of carbohydrate metabolism. The sympathico-adrenaline phase prevailed over the vago-insulin phase and accordingly, the rate of glycogenolysis was higher than that of its synthesis. The above indexes were respectively: 1.75; 1.28 and 1.57. In severe cases a typical diabetes mellitus dysfunction of the insulin apparatus of the pancreas, as well as of the liver was observed, as evidenced by the indices: 1.19–

1.35; 1.16 1.27 and 1.80. In recovery, or after pregnancy termination, the pathological shifts in the vegetative nervous system still remained to some extent and glycogenolysis was more pronounced than glycogenia. Since vitamin C is known to stimulate the vago-insulin phase, the patients' blood and urine were tested for ascorbic acid. Vitamin C was found in minimum quantity, or was absent in these fluids. The C avitaminosis was pronounced in all patients, amounting in mild, moderate and severe cases, resp. to 3120, 3640 and 5000 mg. on the average. It follows that in the above disease, the adrenal cortex is in a hypostate the medulla being in a hyper state. The high rate of glycogenolysis and the low glycogen concn. in the blood are due to an excessive secretion of adrenaline. The relative insufficiency of insulin is due to the large amt. of this hormone used up in counteracting hyperglycemia. The impairment of the liver function is due to its impoverishment in glycogen. This latter deficiency also leads to an increased fat metabolism, which however, cannot go beyond the keto-bodies stage, these substances accumulating in the liver. Finally lack of carbohydrates leads to increased deamination of proteins, which also results in impaired liver cells. It was also noticed that sympathicotropic overstimulation causes intolerance of glucose, while vagotropic excitation produces insulin idiosyncrasies. Both types are observed even when the liver is not damaged. It is concluded that vitamin C given to saturation alone, or where possible in combination with glucose and insulin would have a therapeutic effect on these patients.

C. S. Shapiro

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

LEBEDEV, A.A.

Activities of chief obstetrician-gynecologists in RSFSR. Akush. gin.,
Moskva no.5:32-37 Sept-Oct 1952.
(CIML 23:2)

1. Professor, Head Obstetrician-Gynecologist of the Ministry of Public
Health RSFSR.

LEBEDEV,Anatoliy Alekseyevich

[Determination of the stage of pregnancy; manual for physicians]
Opredelenie sroka beremennosti; posobie dlia vrachei. Moskva,
Gos. izd-vo med. lit-ry, 1955. 87 p.   (MIRA 8:7)
                    (Pregnancy)

LEBEDEV, A. A.; MEN'SHUTINA, N.A.

Method of decreasing blood loss in the placental stage and shortening its duration. Akush. i gin. no.2:81-84 Mr-Ap '55. (MIRA 8:7)

1. Iz kafedry akusherstva i ginekologii (zav. -prof. A.A.Lebedev) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni I.V.Stalina i rodil'nogo doma No.7 imeni Grauermana (glavnyy vrach - zasluzhennyy vrach Ye.A.Botoyeva)
    (LABOR,
        third stage, decrease of blood loss in placental stage by shortening of duration)
    (HEMORRHAGE,
        uterus, in third stage, decrease of blood loss by shortening duration of third stage)
    (UTERUS, hemorrhage,
        in third stage, decrease of blood loss by shortening duration of third stage)

LEBEDEV, A. A., professor (Moskva)

Present trend in the prevention and treatment of pregnancy
toxemias. Sovet. med. 19 no.5:14-20 My '55.   (MLRA 8:8)
      (PREGNANCY TOXEMIAS, prev. and control)

LEBEDEV, Anatoliy Alekseyevich, doktor med.nauk, prof.; USPENSKAYA, N.V., red.; GUBIN, M.I., tekhn.red.

[Woman's health and maternity] Zdorov'e zhenshchiny i materinstvo. Moskva, Izd-vo "Znanie," 1957. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.8, nos.50/51)   (MIRA 11:1)
            (WOMEN--HEALTH AND HYGIENE)

LEBEDEV, A.A.

[Vomiting in pregnancy] Rvota beremennykh. Moskva, Medgiz, 1957.
172 p.   (MIRA 11:4)
        (PREGNANCY)   (VOMITING)

LEBEDEV, A.A., prof.; SINITSYNA, M.A.; PAVLOVA, I.I.

Medical gymnastics in obstetrics. Akush. i gin. 35 no.3:20-
26 My-Je '59.   (MIRA 12:8)

1. Iz kafedry akusherstva i ginekologii (zav. - prof.A.A.Lebedev)
pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta
imeni Pirogova.
            (PREGNANCY
                    exercise ther., evaluation (Rus))

LEBEDEV, Anatoliy Alekseyevich, red.

[Clinical, morphological, and hormonal parallels in dysfunctional uterine hemorrhages] Kliniko-morfologo-gormonal'nye paralleli pri disfunktsional'nykh matochnykh krovotecheniiakh. Moskva, 1960. 209 p.   (MIRA 14:7)

(HEMORRHAGE, UTERINE)

LEBEDEV, A.A. (MOSCOW, USSR)

Klinisch-morphologisch-hormale Bedingungen zur Motivierung
konservativer Operationem des Myoma uteri.

Report submitted for the 3rd World Congress, Intl Federation of
Gyneology and Obstetrics, Vienna, Austria, 3-9 Sep 1961.

LEBEDEV, Anatoliy Alekseyevich, prof.; KOZHANOVA, Lidiya Savel'yevna;
RYKUNOV, Yerminingel'd Ivanovich; SINITSYNA, Mariya Andreyevna;
CHEKANOVA, V.I., red.; VORONINA, R.K., tekhn. red.

[Physiological bases for the prevention of complications in
antenatal fetal development; a manual on the overall prepara-
tion of pregnant women for labor] Fiziologicheskie osnovy pro-
filaktiki oslozhnenii antenatal'nogo razvitiia ploda; posobie
po kompleksnoi podgotovke beremennykh k rodam. Moskva, Vysshaia
shkola, 1962. 81 p.   (MIRA 15:7)
                        (PRENATAL CARE)

LEBEDEV, A.A., prof.; RYKUNOV, Ye.I.; SINITSYNA, M.A.; PRIBYLOV,
   K.N.; BYLIONOK, V.K.; PAVLOVA, I.I.; GOTOVTSEV, P.I., red.;
   YAKOVLEVA, N.A., tekhn. red.

[Exercise therapy in obstetrics and gynecology]Lechebnaia fiz-
kul'tura v akusherstve i ginekologii; posobie dlia vrachei
zhenskikh konsul'tatsii i rodil'nykh domov. Moskva, Medgiz,
1962. 173 p.   (MIRA 15:12)
                    (EXERCISE THERAPY)
              (OBSTETRICS)   (GYNECOLOGY)

LEBEDEV, A. A., prof.

Fetopathies and their significance for the pathogenesis of some gynecological diseases. Akush. i gin. no.2:49-54 '62.
(MIRA 15:6)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. A. A. Lebedev) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N. I. Pirogova.

(FETUS—DISEASES)   (GYNECOLOGY)

LEBEDEV, Aleksey Andreyevich, kand.tekhn.nauk

Determination of the ellipticity coefficient of the magnetic field of the massive rotor of an electric machine. Izv.vys. ucheb.zav.; elektromekh. 4 no.8:18-21 '61.   (MIRA 14:8)
    (Electric machinery) (Magnetic fields) (Armatures)

LEBEDEV, Aleksey Andreyevich, kand.tekhn.nauk

      Circle diagram of a quick-acting electric motor. Izv. vys. ucheb.
zav.; elektromekh. 4 no.12:87-90 '61.   (MIRA 15:1)
        (Automatic control--Electric equipment) (Electric motors)

SYROMYATNIKOV, I.A.; NEKRASOV, A.M.; LEBEDEV, A.A.; KOSTENKO, M.P.;
NEYMAN, L.R.; VASIL'YEV, D.V.; KAMENSKIY, M.D.; USOV, S.V.;
POSSE, A.V.; UL'YANOV, S.A.; FAZYLOV, Kh.F.

Professor N.N. Shchedrin; on his seventieth birthday and fortieth
anniversary of his educational work. Elektrichestvo no.1:94-
95 Ja '62.   (MIRA 14:12)
              (Shchedrin, Nikolai Nikolaevich, 1891-)

BOGORODITSKIY, N.P.; VINOKUROV, V.I.; YERMOLIN, N.P.; LEBEDEV, A.A.; POTSAR, A.A.;
    TERENIN, A.N.; FREMKE, A.V.

    Professor Boris Pavlovich Kozyrev, 1895- ; on his 70th birthday.
    Elektrichestvo no.9:89 S '65.   (MIRA 18:10)

BESSONOV, L.A.; DOMANSKIY, B.I.; DROZDOV, N.G.; D'YACHENKO, N.Kh.;
    ZHEKULIN, L.A.; ZAYTSEV, I.A.; ZALESSKIY, A.M.; KAMENSKIY, M.D.;
    KOSTENKO, M.P.; LEBEDEV, A.A.; LOMONOSOV, V.Yu.; MITKEVICH, A.V.;
    SMIRNOV, V.S.; TOLSTOV, Yu.G.; USOV, S.V.; SHRAMKOV, Ye.G.

    L.R. Neiman; on his 60th birthday and the 35th anniversary of
    his educational work. Elektrichestvo no.6:93-94 Je '62. (MIRA 15:6)
                    (Neiman, Leonid Robertovich, 1902-)

L 02405-67

ACC NR: AP6015402   (N)   SOURCE CODE: UR/0375/65/000/012/0046/0048

AUTHOR: Lebedev, A. A. (Engineer, Colonel); Kosarev, V. V. (Commander); Gaziyev, A.
A. (Engineer, Lieutenant commander)

ORG: none

TITLE: How to simplify the development of course programs

SOURCE: Morskoy sbornik, no. 12, 1965, 46-48

TOPIC TAGS: programmed teaching, learning mechanism, EDUCATION

ABSTRACT: The use of linear and circular graphs in setting up course programs is dis-
cussed. A specific illustration in the development of a course of study on radio engi-
neering equipment is given. The circular graph indicates the number of hours to be
denoted to lectures, practical exercises and laboratory work for specialized and gene-
ral courses within a given discipline. The linear graph indicates specific topics and
states specifically what the student should know about a given topic. The authors con-
clude that with the aid of these graphs and diagrams, the course compiler can elimi-
nate duplication of course material, more easily decide on the number of hours to be
assigned to the study of various materials, choose the optimal sequence for presenting
the material, and obtain a clear picture as to the actual volume of material to be
studied. Orig. art. has: 2 figures.

SUB CODE: 05/   SUBM DATE: none
Card 1/1

L 02442-67   EWT(1)   GW

ACC NR: AT6006571   (N)   SOURCE CODE: UR/2546/65/000/142/0028/0032

AUTHOR: Lebedev, A. A.

ORG: none

25
B+1

TITLE: Year to year changes in ice and thermal conditions of North Atlantic waters and adjacent seas

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 142, 1965. Morskiye prognozy i raschety (Marine forecasts and calculations); materialy Vsesoyuznogo soveshchaniya, noyabr' 1963 g., 28-32

TOPIC TAGS: sea ice, hydrology, synoptic meteorology , ATMOSPHERIC TEMPERATURE NORTH ATLANTIC OCEAN, BARENTS SEA

ABSTRACT: The relation of thermal and ice conditions in the North Atlantic and the relation temperature of water masses of the North Atlantic and the Barents Sea were investigated on the basis of observations made in 1900-1955. Calculations were made using the formula

$$\Pi = \frac{k_1 - k_2}{H}$$

where Π is the relation indicator, k_1 is the number of coincidences of anomaly of the same sign, k_2 is the number of coincidences of anomaly of different sign, and H is the

Card 1/2

L 02442-67

ACC NR: AT6006571   O

total number of coincidences (years). The data show that 1) the relation coefficient
from year to year is of insignificant value; 2) the relation coefficient for extreme
ice conditions is rather significant; 3) the mean yearly temperature anomalies of
three selected large regions of the North Atlantic show a pronounced relation and no
coupling with the mean temperature anomalies of the Barents Sea; 4) there is no con-
gruence between the Labrador and North Cape currents; and 5) year to year changes in
ice and thermal conditions in the North Atlantic and adjacent seas are closely connect-
ed with the interaction of the hydrosphere and atmosphere which lead often to the di-
vergence of macrosynoptic and hydrological processes on both sides of the North At-
lantic. Orig. art. has: 3 figures, 4 tables.

SUB CODE: 04,08/   SUBM DATE: none

Card 2/2

OSTOSLAVSKII, I.V., and A.A. LEBEDEV

O raschete pod''ema skorostnogo samoleta. (Tekhnika vozdushnogo flota, 1946, no. 8/9, p. 21-27, diagrs.)

Title tr.: Performance calculations for high-speed aircraft in climb.

TL504.T4 1946

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

LEBEDEV, A. A., Engr.   Cand. Tech. Sci.

Dissertation: "Certain Problems of the Aerodynamics of a Wing in a Supersonic Flow."
Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze, 22 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

USSR/Mathematics - Stability

Card 1/1

Author   : Lebedev, A. A.

Title   : The problem of stability of motion in a finite time interval

Periodical : Prikl. mat. i mekh., 18, 75-94, Jan/Feb 1954

Abstract   : Employs the method of G. V. Kamenkov for the use of equations of the
               first approximation to determine the conditions of stability of non-
               stationary motion for finite initial and constantly acting disturbances.
               Gives a method for the definition of the time interval during which
               undisturbed motion is stable.

Institution :

Submitted   : September 21, 1953

LEBEDEV, A. A.

USSR/Mathematics - Stability of Motion

FD-647

Card 1/1 : Pub. 85-2/20

Author : Lebedev, A. A. (Moscow)

Title : Stability of motion in a given interval of time

Periodical : Prikl. mat. i mekh., 18, 139-148, Mar/Apr 1954

Abstract : Considers the problem of the stability of motion on a given
interval of time, finite or infinite, for the general case of
nonstationary motion. The basic method for solving this problem
is Lyapunov's second method (A. M. Lyapunov, Obshchaya Zadacha ob
ustoychivosti dvisheniya [General Problem of the Stability of
Motion], GITTL, 1950). In setting up this problem the author uses
here a work of N. G. Chetayev ("An idea of Poincare," Sbornik
nauchin. tr. Kazansk. aviats. Instituta [Collection of Scientific
Works of the Kazan Aviation Institution], No 3, 1935) and a work of
G. V. Kamenkov ("Stability of motion in a finite interval of time,"
PMM, 17, No 5, 1953).

Institution : --

Submitted : December 15, 1953

LEBEDEV, A. A.

USSR/Mathematics - Stability of motion   FD-849

Card 1/1   : Pub. 85 - 14/14

Author   : Kamenkov, G. V., and Lebedev, A. A.

Title   : Remarks concerning an article on stability in a finite interval of time

Periodical   : Prikl. mat. i mekh., 18, 512, Jul/Aug 1954

Abstract   : The authors make more precise the definition of stability in a finite
                   interval of time (G. V. Kamenkov, "Stability of motion in a finite in-
                   terval of time," PMM, 17, No. 5, 1953. A. A. Lebedev, "Stability of
                   motion in a given interval of time," PMM, 18, No. 2, 1954).

Institution   : --

Submitted   : --

LEBEDEV, Aleksandr Aleksandrovich

Academic degree of Doctor of Technical Sci, based on his defense, 23 May 1955, in the Council of Moscow Order of Lenin Aviation Inst imeni Ordzhonikidze, of his dissertation entitled: "Stability of Irregular /Neustavivshegosya/ Movement at the Final Time Interval."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 1, 7 Jan 56, Byulleten' MVO SSR, Uncl.
     JPRS/NY-548

LEBEDEV, H-A-

PHASE X   TREASURE ISLAND BIBLIOGRAPHICAL REPORT   AID 762 - X

Call No.: AF684925

BOOK
  Authors: LEBEDEV, A. A., STRAZHEVA, I. V. and SAKHAROV, G. I.
  Full Title: Aeromechanics of Aircraft
  Transliterated Title: Aeromekhanika samoleta (Aircraft Fluid Mechanics)
PUBLISHING DATA
  Originating Agency:
  Publishing House: Gosudarstvenove izdatel'stvo oboronnoy promyshlennosti.
                     Moscow.
  Date: 1955   No. pp.: 472   No. of copies:
  Editorial Staff: None
       Others: Gratitude for cooperation is expressed to: Profs.
  Ostoslavskiy, I. V., Burago, G. F., Martynov, A. K. and
  Zhuravchenko, A. N.
PURPOSE AND EVALUATION: This is a textbook for courses in aviation
  institutions of higher learning in which aeromechanics is taught
  in abbreviated form. The interest of the book consists in the
  quantity of material it presents in a comparatively small volume.
  It shows also how aerodynamics and aircraft mechanics is taught
  in the USSR and what is the general approach to problems of the
  design and calculation of aircraft. The works of Zhukovskiy and
  other Russian scientists are often mentioned as a basis for
  future developments. However, the basic approach to theoretical
                              1/7

Aeromekhanika samoleta

and practical problems of subsonic and supersonic aerodynamics and
aeromechanics does not differ from the American approach. The
book consists of two parts and seven chapters. It is provided
with 352 clear diagrams.

TEXT DATA
   Coverage: This textbook is intended to: 1) give the student the
   indispensable information on the basic laws of the flow of
   fluids and the flow over bodies at various speeds, 2) acquaint
   the reader with contemporary methods of experimental research in
   aerodynamics and with apparatus used in aerodynamic laboratories,
   3) generalize basic information about methods of aerodynamic
   calculation of aircraft for stability and maneuverability.

Table of Contents   Pages
   Preface and Introduction
      The purpose of the book is explained and definitions
      of basic terms are given.
   Part One. Fundamentals of Aerodynamics
      Chapter I. Basic Laws of the Flow of Gases   3-6
         The author reviews the properties of fluids, basic
         laws of kinetics, fundamental equations of one-
         dimensional flow, and other phenomena of one-

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Aeromekhanika samoleta

dimensional flow for subsonic and supersonic
speeds.
Chapter II.   Methods of Experimental Research   69-132
The author gives basic information on aerodynamic
forces and moments acting on the aircraft, on the
adaption of the theory of similarity in aero-
dynamics, on the methods of aerodynamic experi-
mentation and on the methods of measurement of
pressure and the determination of the speed of
the flow of the air. He discusses criteria of
similarity taking into account: 1) viscosity, 2)
compressibility, 3) periodicity of phenomena, 4)
initial turbulance of the flow. He gives the
history of the development of wind tunnels in the
USSR, cites names of prominent scientists in this
field, and describes Russian-built wind tunnels
of the Moscow Aerodynamic Institute (pp. 93, 95,
102). He describes methods of study of the
physical picture of the flow over bodies and gives
photos and diagrams of Russian-built apparatus
(pp. 107-110). He mentions briefly flight experi-
ments and gives names of prominent test pilots

Aeromekhanika samoleta

(p. 113). At the end of this chapter the author
describes methods of measurement of pressure and
determination of the speed of the flow of air, in
particular the measurement of the normal flow by
means of static pressure, pressure receptacles,
pressure drop and thermoanemometers. He gives
also methods of measurement of flows of sonic
speed. A Russian-built pressure measuring device
is described (p. 129).

Chapter IV. Aerodynamic Forces at Above Critical M
Numbers   236-268

In this chapter the author discusses the super-
sonic flow of gases, the drag of bodies immerged
in this flow, shock waves, wave resistance, and
shock wave polar curve. He describes aerodynamic
characteristics of wings of supersonic aircraft,
distribution of pressure on the airfoil, flow
over obtuse and convex angles, and the behaviour
of wings of finite span in an supersonic flow.

Chapter V. Propellers   269-295

The author gives the geometric and kinematic

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characteristics of propellers and mentions Russian
scientists in this field (p. 281). He develops the
theory of the propeller, of an element of propeller
blade and of the theory of similarity applied to
propellers. He gives aerodynamic coefficients of
propellers and describes the influence of the
compressibility of air on their operation. At the
end of this chapter, the author gives the basic
types of propellers and their characteristics. He
mentions the following propellers: fixed pitch,
variable pitch, feathering, reversible pitch or
braking, differential reversing, and coaxial.

Part Two. Aircraft Aeromechanics
    Chapter VI. Determination of Basic Flying Character-
                istics of Aircraft
    The author gives general equations of aircraft   296-380
movement and describes the conception of overload,
the curvilinear flight in various planes, takeoff,
landing, diving and recovery, and the figures of
advanced piloting. He explains how the initial
data for aerodynamic calculations are obtained,
describing basic types of power plants and jet and

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Aeromekhanika samoleta

during the disturbed side motion, and the influence of static coefficients on lateral stability. In the last paragraph, the author considers the maneuverability of aircraft. In particular, he discusses the diagrams of equilibrium, the effectiveness of rudders and ailerons, criteria of maneuverability with the connection of stresses on the control column and the rudder, lateral maneuverability in flight on larger angles of incidence, auto-rotation and the spin.

No. of References: Russian 22, 1933-1953, Other 1, 1949.

Facilities: Moscow Aviation Institute

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LEBEDEV, A.

X-ray detection of faults in engine spark plugs. Grazhd.av. 13
no.2:28 F '56.   (MLRA 9:5)
(Spark plugs) (X rays--Industrial applications)

LEBEDEV, A.

84-11-19/36

AUTHOR: Lebedev, A., Ryasnov, L.

TITLE: A Plug-type Coupling (Shtepsel'nyy raz"yem)

PERIODICAL: Grazhdanskaya aviatsiya, 1957, Nr 11, p.20 (USSR)

ABSTRACT: About ten different types of couplings for connecting the aircraft power network to airport power mains are currently used in aircraft. The multiplicity of types complicates maintenance and requires many adapter sets in airports. At present, standardization of couplings is in process, the number of couplings being reduced to two types: the ShRAP-50 for d.c. and the ShRA-200 for a.c. A photograph shows the ShRAP-500 coupling.

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PA - 2217

AUTHOR   LEBEDEV, A.A.
TITLE   On a Method for the Construction of LYAPUNOV Functions (Ob odnom metode postroyeniya funktsiy Lyapunova).
PERIODICAL Prikladnaia Matematika i Mekhanika,1957,Vol 21,Nr 1, pp 121-124 (U.S.S.R.)

Received 3/1957   Reviewed 5/1957

The present work develops the methods suggested by N.G.CHATEYEV (Prikl.Mat.i Mekh.,Vol 9,Nr 3, 1945) and in his monography on the "Steadiness of Motion"(Ustoycivost' Dvisheniya, Moscow 1946). For this purpose the linear system of the equations of the disturbed motion $dx_i/dt = p_{i1}(t)x_1 + \ldots + p_{in}(t)x_n$ $(i = 1,\ldots n)$. Here $p_{ij}(t)$ are real, pariodic, limited, and steady functions of the real variable t. When investigating the system by LYAPUNOV's direct method the quadratic form $B(t,x_1,\ldots x_n) = (1/2)\sum_{i,k} \beta_{ik}(t)x_i x_k$ can be used as a LYAPUNOV function. Also the derivation dB/dt is a quadratic form and their coefficients are given. Together with the above system, a system with the constant coefficients $dx_i/dt = p_{i1}x_1 +\ldots p_{in}$ x_n $(i = 1\ldots n)$ is investigated. Here p_{ij} denote the values of the coefficients $p_{ij}(t)$ of the above system at any point of time t or the mean values for any interval of time. For the determination of the values β_{ik} a system of $n(n+1)/2$ equations is given. The "characteristic equation" is then investigated.
By the methods investigated here for the construction of the LYAPUNOV functions it is not always possible to solve the problem of stability. However, the present work suggests a method of solving the sta-

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On a Method for the Construction of LYAPUNOV Functions.   PA - 2217

bility problem also for these cases. Here the LYAPUNOV function $V = \varphi(t)B(t,x_1,\ldots x_n)$ is studied, where B denotes the aforementioned quadratic form and $\varphi(t)$ a periodic, limited, and steady differentiat- able function. For the investigation of the disturbed motion a quadratic form is assumed to be given. The undisturbed motion is stable if it is possible, for the given quadratic form B, to select the function φ in such a manner that $V = \varphi B$ satisfies LYAPUNOV's main theorems on stability. It is then possible to determine an upper and a lower limit for $\varphi(t)$ at every point of time. The properties of these limits are here discussed. The results obtained apply also in the case of any LYAPUNOV functions constructed in form of quadra- tic forms. (No illustrations)

ASSOCIATION   Not given
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SUBMITTED   3. 1. 1956
AVAILABLE   Library of Congress

Card   2/2

SOV/147-58-1-2/22

AUTHOR: Lebedev, A.A.

TITLE: On the Application of the Method of "Fixed Coefficients" in the Investigation of the Stability of Unestablished Motion (O primenenii metoda "zamorozhennykh koeffitsiyentov" dlya issledovaniya ustoychivosti neustanovivshegosya dvizheniya)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, 1958, Nr 1, pp 11 - 18 (USSR).

ABSTRACT: Let the disturbed motion of a dynamical system be described by a linear homogeneous set of differential equations in which the coefficients of the variables $x_1, \ldots, x_n$ are continuous and bounded functions of the time t. The method of the title consists in replacing the given system by the set of all systems with constant coefficients for fixed moments t_* in the required interval of time. It is supposed that the zero solution of the given system is stable if the real parts of the roots of the characteristic equation are negative for all values of t in the range under discussion. Stability under a constantly acting force in a finite interval of time is defined. In the general case of unestablished motion, the stability depends on the choice of the time origin.

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On the Application of the Method of "Fixed Coefficients" in the Investigation of the Stability of Unestablished Motion

Unestablished motion is uniformly stable in $t_1 \leqslant t \leqslant t_2$, if it is stable in $t_0 \leqslant t \leqslant t_2$ where $t_1 \leqslant t < t_2$. The conditions are given which the roots of the characteristic equation must satisfy in the finite interval $t_1 \leqslant t \leqslant t_2$ in order that unestablished motion may be uniformly stable in that interval for a constantly acting disturbance. The general theory is applied to a second order system describing the free oscillations of a V-2 type rocket. There are 2 figures, 1 table and 3 Soviet references.

ASSOCIATION: Kafedra aeromekhaniki samoleta, Moskovskiy aviatsionnyy institut (Chair of Aircraft Aeromechanics, Moscow Aviation Institute)

SUBMITTED: November 18, 1957

Card 2/2

1. Rockets--Oscillations   2. Oscillations--Mathematical analysis
3. Differential equations--Applications

LEBEDEV, N. N.

(5)

Moscow. Aviatsionnyy Institut imeni Sergo Ordzhonikidze

Nekotoryye metody rascheta sistem avtomaticheskogo regulirovaniya, ikh elementov i uzlov (Some Methods of Calculating Automatic Control Systems and Their Components) Collection of Articles] Leningrad, Sudpromgiz, 1959. 131 p. (Series: Its: Trudy, vyp. 112) Errata slip inserted. 3,400 copies printed.

Scientific Ed.: B.N. Petrov; Ed. (Title page): B.N. Petrov, Corresponding Member USSR Academy of Sciences, Professor; Ed. (Inside book): V.S. Chichkanov; Tech. Ed.: M.V. Kravtova.

PURPOSE: This collection of articles is intended for specialists in scientific research institutes and special design bureaus and plants engaged in problems of automatic regulation. It may also be useful to students and teachers in schools of higher education.

COVERAGE: This collection of articles presents original works in the field of analysis and synthesis of nonlinear systems of automatic regulation and of linear systems with variable parameters. Some problems of calculating individual components of automatic systems are also discussed. References are listed after most of the papers.

Furashov, B.S., Candidate of Technical Sciences. Obtaining Optimal Processes in Certain Relay Regulation Systems

The author defines as "optimal" the shortest aperiodical transient process (at a given amplification factor of the relay component) without overcorrections and with zero residual irregularity. He investigates a relay regulation system affected by an external disturbance. The attempts to determine the auxiliary signal necessary for obtaining optimal conditions.

Bibliography

V. ..rgesrt, S.V., Candidate of Technical Sciences. Regulation of a Neutral Object by Using an Astatic Regulator with a Nonlinear Correction

The author discusses a method of regulating a neutral object by an astatic regulator with proportional velocity and nonlinear correction, which permits obtaining a system stable in the large. The regulating process would be damped in the first amplitude, and the regulation time minimal (for given initial disturbances and given constant equation coefficients of the object and of the regulator. Both the object and the regulator are described by equations of the first order. The author makes a qualitative investigation of such a system and presents all possible kinds of movement occurring after arbitrary initial disturbances. He establishes relationships between parameters which determine the dynamic indices of the system.

Bibliography

Lebedev, N.N., Doctor of Technical Sciences. Motion Stability in the Final ... Interval

The author investigates disturbed motion in the final time interval by using the direct method of .yapunov. As an example, he determines the maximum time interval in a problem presented by ... Kamenkov.

Bibliography

K..s..i, S.P., Candidate of Technical Sciences. Critical Temperature Forming in Coilings of Regulator Electrical Components

The author investigates this problem in the case of a de-winding at a constant voltage, and finds an expression for the critical temperature.

Bibliography

Zelenov, M.A., Engineer. Semiconductor Thermistors in Relay Circuits

The author constructed a time relay equipped with a semiconductor thermistor at r ... and supplied from an ac network at commercial frequency. He investigates the stability of its operation with fluctuation in the voltage and gives the efficient range of time delays and of operating conditions.

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SOV/144-59-5-3/14

AUTHOR: Lebedev, A.A., Associate, Engineer-Major

TITLE: The Magnetic Field in the Air Gap of an Induction Motor
          with Arc-Shaped Stator, Excited by the Primary Winding

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektro-
          mekhanika, 1959, Nr 5, pp 14 - 23 (USSR)

ABSTRACT: Induction motors in which the stator covers only an arc
          and not a complete circle require special types of stator
          winding to avoid serious edge-effects at the end of the
          stator. A special feature of a new type of stator wind-
          ing designed for such machines is that the loading on the
          stator tapers off towards the ends. The use of such
          windings considerably increases the efficiency of motors
          with arc-type stators and solid rotors. Professor G.I.
          Shturman in an article in Elektrichestvo Nr 10, 1946,
          studied the excitation of magnetic fields in arc-type
          stators but his formulae are not applicable to machines
Card 1/4 with the new type of stator winding. This article is

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accordingly concerned with the evaluation of magnetic
fields in the air gap of a stator with the new type of
winding. The simplifying assumptions adopted in the work
are enumerated and explained. The arc-type stator may be
considered as consisting of five sections: in the two
outermost sections there are no windings; in the two inner
ones the linear loading increases from zero to a maximum
value in the direction of the centre; and in the central
section the linear loading is constant. For the purpose
of analysis, the origin of coordinates is located at the
centre of the rotor and the zero line passes through the
middle of the stator. Then the instantaneous value of
the complete current over the length of the arc-type stator
is given by Eq (1). Current equations are then derived in
turn for the three main sub-divisions of the stator des-
cribed above. The method of finding the constants of
integration is explained from formulae (23) - (28) incl-
usive. Finally, Eqs (34), (35) and (36) are obtained for
the induction under the different sections of the stator.

Card 2/4   Analysis of these equations shows that the magnetic field

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contains a component, stationary in space but pulsating
in time,   whose amplitude is greatest at the boundary
between the outer and inner sections where the winding
starts and ends. Curves of the induction in the air gap
of a four-pole machine at various instants of time calcul-
ated by formula (35) are given in Figure 2. The illustrat-
ion also shows an experimental curve of amplitudes of
induction in the gap. The winding diagram of the arc-type
stator is shown in Figure 3a; the rotor diameter was 100 mm
and the stator covered an angle of 230 degrees. Comparison
shows that the theoretical formulae closely describe the
phenomena occurring in the machine. Such differences as
occur arise partly from the assumptions made in deriving
the formulae and also from the fact that the change in
linear load at the ends of the stator was not strictly
Card 3/4 sinusoidal, see Figure 3b. Calculated curves of induction

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without allowance for the pulsating component are shown
in Figure 4, which also includes an experimental curve.
On comparing the curves of Figures 2 and 4 it will be
seen that the amplitudes of the fields differ little from
that of the main field, and that for practical purposes
the calculations on machines with the new type of winding
may be simplified. The above method is then applied to
derive a formula for the induction in the air gap of a
machine with arc-type stator having a constant value of
linear load over the entire arc length, and the advantages
over Shturman's formula are explained.
There are 4 figures and 2 Soviet references

ASSOCIATION:Leningradskaya Krasnoznamennaya Voyenno-Vozdushnaya
            Akademiya imeni A.F. Mozhayskogo (Leningrad Red Banner
            Air Force Academy imeni A. F. Mozhayskiy)

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AUTHOR: Lebedev, A.A. Engineer

TITLE: Checking the Fuses on an Aircraft   SOV/84-60-1-60/76

PERIODICAL: Grazhdanskaya aviatsiya, 1960, Nr 1, p 29   (USSR)

ABSTRACT: The author states that G. Rogov, V. Bobrov and V.
              Aleksandrov have designed a miniature device (the
              PPP-1) for testing fuses in the electrical systems
              of aircraft. Soviet aircraft are fitted with AZS
              automatic safety devices or IP and TP fuses. There
              were formerly 2 test methods, one employing a TT-1
              ohmmeter and necessitating removal of the fuses and
              the other requiring an M-246, M-46 or M-41 micro-
              ohmmeter without fuse extraction. The use of micro-
              ohmmeters under operational conditions is complica-
Card 1/2   ted by the fact that they weigh some 18 kg and need
              a heavy power-source. The PPP-1 operates as follows:

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> Current flows to the terminals in contact with those
> of the sound fuse and the bulb lights and burns
> until the RP-4 relay circuit opens or the source
> is switched off. Current can be switched through
> the secondary RP-4 polarized relay winding. There
> is 1 circuit-diagram.

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E194/E155

AUTHOR: Lebedev, A.A., Engineer Major
TITLE: An Asynchronous Motor with Solid Spherical Rotor
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
             Elektromekhanika, 1960, Nr 1, pp 48-60 (USSR)

ABSTRACT: The development of spherical-rotor variable-speed
             induction motors is briefly reviewed. The use of a solid
             spherical rotor makes it possible to control the speed
             over wide limits by turning the axis of rotation of the
             magnetic field of the stator relative to the axis of
             rotation of the rotor. The angle of rotation of the
             stator, and consequently the limits of control, depend
             upon the dimensions of the rotor axis and the length of
             the stator and end windings, as will be seen from the
             diagram, Fig 1. It is possible to effect smooth speed
             control from zero to maximum speed in both directions by
             using an arc-shaped stator. The length of the stator
             arc is limited only by the dimensions of the rotor shaft.
             In this case the spherical rotor overhangs the bearing
             and the stator enfolds it, as illustrated diagrammatically
             in Fig 2. The solid spherical rotor is used in certain
             kinds of gyroscope. This article is a first attempt to

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develop the theory and method of design of a motor with solid spherical rotor. It does not pretend to completeness and may contain various inaccuracies and approximations. The problem is to determine the characteristics of such an induction motor, given its dimensions and the physical properties of the material. The simplifying assumptions adopted are described. They are mainly concerned with the penetration of current into the rotor, and they make it possible to use the established relationships for the skin effect when deriving the main equations. The general equation for the electromagnetic power of an ordinary induction motor is given. Besides a term proportional to the slip, it includes the hysteresis and eddy-current losses in the rotor. In the solid-rotor motor the first and last of these terms are united, because the rotor eddy-current losses are the rotor winding currents. Some authors in analysing the operation of motors with solid cylindrical rotors have neglected the hysteresis torque. As this is not permissible when the rotor is made of magnetically-

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An Asynchronous Motor with Solid Spherical Rotor

hard steel, the equivalent circuit should resemble that
of a hysteresis motor, to allow for the influence of
eddy currents.   Such an equivalent circuit has already
been suggested by workers of the Moscow Power Institute
and is reproduced in Fig 4. However, the present author
prefers the circuit of Fig 5, as it is simpler and more
convenient for analysis of the motor operation.   The
parameters of the equivalent circuit related to the
stator winding are determined in the usual way and are
not discussed here, but the eddy current and hysteresis
terms are considered separately.   The power loss per
unit surface area of rotor is given by expression (1) and
the effective current density as a function of the
distance from the rotor surface by expression (2).
Expression (11) is derived for the total electrical
impedance of a solid ferromagnetic rotor without allowance
for the hysteresis loss.   For a two-pole machine the

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coefficient that allows for the end-winding resistance
may be determined from formula (12).   For multi-pole

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machines, where this formula is not valid, expression
(13) should be used. When the slip is small, the rotor
current is small and the end-winding field is weak.
It is shown that as a consequence the effective depth of
penetration of the field near the end-winding is 1.4
times deeper than in the active zone of strong fields.
As the rotor slip increases, the rotor currents increase
and the end winding field becomes stronger. The depth
of field penetration both under the end-windings and in
the active parts of the rotor then become about the same.
The method of determining the parameters of the hysteresis
circuit are then considered, its reactance being given by
expression (14). The magnetising component of the rotor
current is determined from expression (17), which
embodies a coefficient given by expression (18). The
various equations necessary for drawing up the equivalent
circuit are then derived and the corresponding vector
diagram of the induction motor with solid steel rotor is
given in Fig 6.   An expression (28) is then derived

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for the motor torque. It consists of two components, one corresponding to the eddy currents, which is given by expression (36), and one corresponding to the hysteresis torque, which is given by expression (38). The formulae that have been derived were in good agreement with experimental results. For example, Fig 7 gives a comparison of the calculated and experimental curves for one type of motor with a solid spherical rotor made of steel grade ShKh-15, of 60 - 65 Rockwell hardness units. The calculated torque is somewhat higher than the experimental because the calculation does not allow for higher harmonics, which particularly influence the operation of a solid-rotor machine. A formula derived by Sharov in an article published in Elektrichestvo, 1959, Nr 4, may be used to determine the relationship between the permeability at the rotor surface and the slip. A minor error in Sharov's formula is pointed out. Except for the aspects mentioned, the design of a solid

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